

'BRSMG TALISMA': COMMON BEAN CULTIVAR WITH CARIOCA GRAIN TYPE

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Common bean in Brazil is cultivated all year in several ecosystems, in about 2,69 million ha with a grain production of 2,34 million tons. It constitutes the basic vegetal protein food in the Brazilian diet, totaling a consumption, "*in natura*", of 16 kg/inhabitant/year. States of Paraná and Minas Gerais are the biggest producers, representing 37,7% of the national production. In Brazil, the traditional preference of bean consumption lies on grain of the carioca commercial type.

BRSMG Talisma cultivar is the result of the network program among Lavras Federal University, Viçosa Federal University, Embrapa Rice and Beans and Agricultural State Enterprise of Minas Gerais (Epamig). It was released in 2002 for Minas Gerais and recommended for Paraná in 2003.

BRSMG Talisma is originated from a recurrent selection program based on a population performed in 1990 including BAT 477, IAPAR 14, FT 84-29, Jalo EEP, A 252; A 77, Ojo de Liebre; ESAL 645, Pintado and Carioca, crossed in complete diallel scheme. In F₂, 2,000 seeds were evaluated in S_{0:1} and S_{0:2} generations being selected 13 families. They were recombined by intercross and, following the same previous scheme, it were selected 18 families of the first cycle. These families were intercrossed and the families were available in S_{0:1}, S_{0:2}, S_{0:3} and S_{0:4} in three locations in the State of Minas Gerais. This work allowed selection of CII-102 line.

From 1998 to 2001, this line was assessed with two controls (Carioca and Perola) in three different cropping seasons (rainy, dry and winter/irrigated) including 25 environments in Minas Gerais, showing 10.6% higher grain yield than the control cultivars. In 2000 and 2001, line CII-102 was also assessed with the same control cultivars in the rainy and dry cropping seasons in 10 environments in Parana State, out yielding the controls in 20.9% (Table 1).

Table 1. Yield of cultivar BRS MG Talisma compared to average grain yields of control cultivars in 1998 to 2002 in Minas Gerais and Parana.

State	Cropping seasons	Number of sites	BRSMG Talisma	Control Carioca	Control Pérola	Relative yield (%)
Minas Gerais	Rainy season	8	2192	1845	1875	117.8
	Dry season	12	2198	2043	2034	107.8
	Winter/irrigated	5	3311	2982	3146	108.1
	Mean	25	2418	2167	2206	110.6
Paraná	Rainy season	7	2480	1874	2022	127.3
	Dry season	3	1731	1618	1736	103.2
	Mean	10	2256	1797	1936	120.9
General mean			2372	2062	2129	113.2

BRSMG Talisma has uniform grain size and color of carioca type (beige with light brown stripes), average 100 grain mass of 26.5 g, excellent cooking quality and good grain appearance after cooked (Table 2).

Table 2. Grain technological and industrial quality.

Cultivar	Cooking time (minutes)	Soluble solids (%)	Protein (%)
BRSMG Talisma	28.5	9.8	23.8

Under artificial inoculation, cultivar BRSMG Talisma showed resistant reaction to the bean common mosaic virus and to 65 and 89 *C. lindemuthianum* pathotypes. In field trials, it showed intermediate reaction to angular leaf spot.

BRSMG Talisma presents a growth duration cycle varying from 75 to 85 days, in average, from emergence to physiological maturity, being earlier than Perola and Carioca cultivars.

Due to its superior yield potential, associated to excellent cooking performance, resistance to major diseases and earliness, BRSMG Talisma is an interesting option for producers involved with carioca grain type production, in the States of Minas Gerais and Parana.

Genetic seed stocks are maintained by Lavras Federal University and basic seed is available at Embrapa Technology and Transfer.

Institutions of participating scientists:

Universidade Federal de Lavras; Embrapa Arroz e Feijão; Embrapa Milho e Sorgo; Universidade Federal de Viçosa; Iapar - Instituto Agronômico do Paraná; Embrapa Soja; Embrapa Negócios para Transferência de Tecnologia /Escritório de Negócios de Ponta Grossa.

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